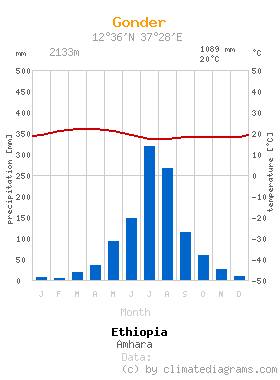
**Graphing Biomes**

As you have learned, Earth is home to many different biomes with varying climates. While these biomes have distinct attributes to their climates, do all areas within a given biome have the same exact climate? You will be investigating this question today, but first you need to know what to look for.

**Gathering your data**:

For this activity, you will be gathering average temperature and precipitation rates for two cities/areas that are geographically distant, but still fall into the same biome. For example, you could choose to compare the Sahara dessert to the Death Valley dessert. After you gather your data, you will place it into a data table and then create a climate diagram for each area. Your climate diagram should look like this:



Note: For your climate diagram, you need to make sure you have appropriately labeled axis, and place the name of your city/area as the title of the diagram. You do not need to include latitude and longitudinal values.

**Data Tables:**

**Location/Biome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| --- | --- | --- |
| **Month** | **Average temperature**  **(°C)** | **Average Precipitation**  **(mm)** |
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**Location/Biome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Month** | **Average temperature**  **(°C)** | **Average Precipitation**  **(mm)** |
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**Climate Diagrams:**

For your climate diagrams, please use either a computer graphing program such as Microsoft Excel or by hand using graphing paper.

**Green Thumbs!**

Since we have been studying how biotic and abiotic factors interact to shape an ecosystem, it’s time we experimented a little. You and your lab partner will be designing an experiment to look at how abiotic factors can affect different species of plants.

**Materials:** Each group will be working with both rice seeds and rye seeds. You will also be given paper cups to act as your planters. Depending on which abiotic factor you wish to test, (soil type, sunlight, water, humidity), you will be provided with the specific materials.

**Procedure:** You and your partner will need to develop a hypothesis and prediction based on the abiotic factor you wish to use as your variable. Once you have done that, you will then design and carry out your experiment for the next 2 weeks. You and your partner will be responsible for recording data.

**Due Date:** Your final lab report will be due 3 weeks from today. This gives you some time after you have completed your experiment to organize your data and generate your report. Look at the next page for questions that you should address in your lab report.

**Lab Questions:** These questions should be addressed within your lab report

* **What abiotic factor did you manipulate?**
* **How did you manipulate it?**
* **What was your hypothesis? Your prediction(s)?**
* **What did you do for controls?**
* **Did either plant grow better than the other? If so why?**

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